BY MURRAY F. FOSS AND WALTER LEIBOWITZ

Investment in Fuel and Power Industries

Advancing Technology and Growth Amid Shifting Markets

THE FUEL and power industries are responsible for a significant portion of plant and equipment expenditures by U.S. business, having added over $100 billion in new privately owned capital facilities in the 15 years since the end of World War II. Investment in these industries in the recent period, however, suggests a somewhat different picture from the one that prevailed earlier. While 1960 finds the current and near-term anticipated investment of electric and gas utilities not far from earlier peaks, petroleum investment is well below, and at present shows no signs of achieving in the near future, previous highs. In the past few years the productive capacity of the petroleum industry has been running in excess of demand, with a resultant lowering of new domestic capital expenditures.

This article covers the conventional energy sources and the associated private investment; atomic power and chemical rocket fuels are not included. The role of the Federal Government in utility investment has been a major one, however, through public power expenditures, as in TVA, and through the aid to REA cooperatives. Utilities other than the investor owned private systems—Federal, State, municipal, and cooperative—have been spending over $1 billion per year for new capital facilities and now account for one-fourth of electric power capacity.

Rise in output

Combined output of the industries has grown considerably, with varying rates of change among the major components. Natural gas has come to the fore, while production of both anthracite and bituminous coal has decreased.

The share of investment accounted for by the electric utilities has increased in importance as compared with the fuel producing industries. This reflects the much more rapid growth in the consumption of electricity than in mineral fuels—a development which stems partly from technological innovations producing large economies in fuel use in electric utilities and other industries. In the face of severe competition from other fuels, the coal industry has intensified efforts to mechanize as a means of holding markets. Technological developments in electric and gas utilities have made possible economies in investment outlays relative to a given amount of increased capacity, so that a significant part of the postwar rise in new plant and equipment costs has been offset.

Investment one-fourth of U.S. total

The first chart illustrates the strong postwar growth in investment in electric and gas utilities and petroleum. Capital outlays of these industries for the period 1956–60 account for one-fourth of total plant and equipment expenditures. The movement of this investment during the postwar recessions is of particular interest since it suggests an increasing vulnerability to cyclical reductions in demand.

Outlays rose in 1949 while total plant and equipment expenditures were falling, though a lagged effect may be noted; they dipped slightly in 1950—a year of recovery in total fixed investment. In 1954, capital outlays in these industries fell about 3 percent, as compared with a drop of 7 percent in the total. However, in the most recent recession year outlays fell by an eighth—again somewhat less than aggregate capital expenditures—and they continued to decline another 3 percent in 1959, while total investment was recovering.

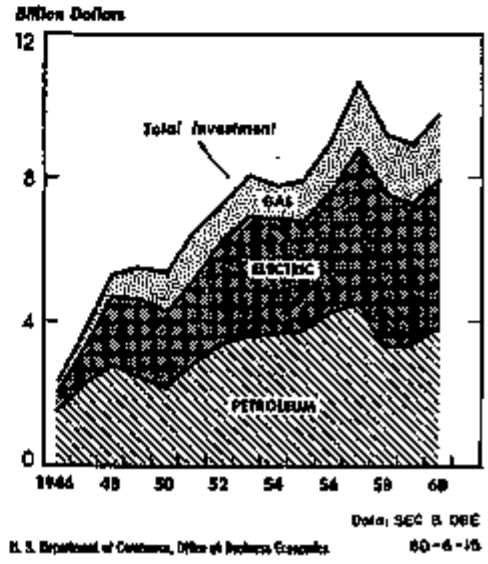
Aside from the rise in the early postwar period, there is no apparent trend in the ratio of energy outlays to the total. Within the group, an increasing share of investment is being accounted for by the electric utilities—from about 38 percent in 1948–50 to about 45 percent in the 1958–60 period; the relative importance of the gas industry has also increased, while that of petroleum has declined.

Market patterns

The second chart presents data on energy consumption from mineral fuels, expressed in terms of British thermal units (B.t.u.'s). The total has increased by about one-third from 1947 to 1959, with wide shifts in the internal market composition. Coal consumption has declined one-third, while crude petroleum and natural gas, continuing long periods of growth, have increased about 75 and 150 percent, respectively. Since 1956 there has been only a slight increase in the aggregate, natural gas being the only fuel showing a continuing rise.

CAPITAL OUTLAYS OF FUEL AND POWER INDUSTRIES

After Strong Upsurge Are Now More Sensitive to Cyclical Influences



Coal accounted for as much as half of the energy consumption total in the form of mineral fuels as recently as 1946, but in the past few years has dropped to one-fourth of the aggregate. Natural gas accounts for close to 30 percent of the total, while the petroleum proportion is somewhat under one-half.

Electricity consumption has almost tripled since 1947. Its average growth rate in the postwar period has been over 9 percent as against about 3 percent for the mineral fuels total.

Energy use relative to GNP

Mineral fuel consumption as measured above has risen less than real GNP, not only since the early postwar period but also in the past few decades. However, a special index was prepared in order to give recognition to the increasing utilization of energy in the form of electricity, and to the rapid rise in household use—where the value per unit of consumption is higher than in industrial use.

In this index, electricity consumption was measured directly rather than through the fuels consumed in electricity production. Aggregate consumption of each of the mineral fuels was reduced by that portion of their respective totals consumed by the electric utility industry. All components were combined by final market value weights based on the period 1947–49. These results reveal a rise since 1947 considerably in excess of the growth in real GNP.

In many important respects long-term changes in the economy have had the effect of increasing energy use relative to total production for the period under consideration. The real stock of producers' equipment has shown a tendency to rise relative to privately produced real output. In agriculture, the substitution of machinery for animals and the growth of equipment used has been especially large. The stock of automobiles and consumer appliances have also shown more pronounced long-term gains than has overall output.

Economies in fuel use

While the above-mentioned factors have tended toward greater energy use, powerful forces have worked in the direction of increasing the efficiency of utilization. Three aspects of this economy are illustrated in the bottom panel of the second chart. All represent a continuation of longer term trends. In 1920, for example, the equivalent of 3 pounds of coal was required to produce a kilowatt-hour of electricity; today the corresponding figure is below 1 pound. The railroad figure reflects the complete dieselization of the U.S. railroad system during the postwar period—the diesel locomotive being a far more efficient user of fuel than the steam locomotive.

Growth of Electric Utilities

THE growth in sales by electric utilities has been characterized by very sharp gains in residential use, which in 1947 accounted for 20 percent of total sales and by 1959 was up to 28 percent. Since 1947 the number of residential customers has increased more than 50 percent, and average consumption per customer has increased about 150 percent. Industrial (as distinct from commercial) use continues to claim the largest share of the electric energy market; while such demand has risen considerably, the relative share has fallen.

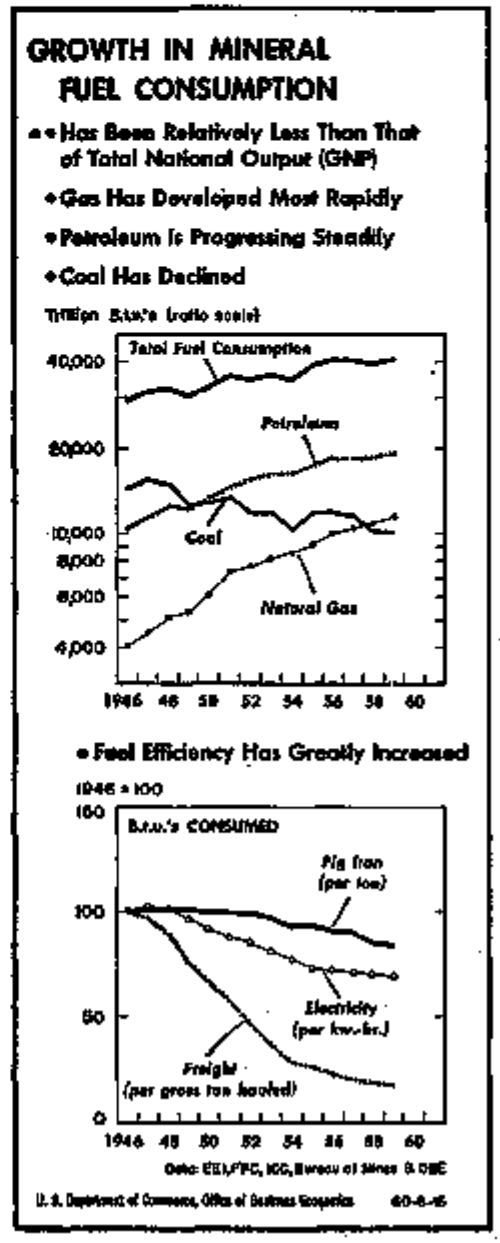
Capacity expansion

The upper panel of the third chart illustrates the growth in sales and generating capacity—both public and private. The capacity increase refers to the capability of the industry to service peak December loads—a somewhat better measure than the more conventional nameplate capacity.

The bottom panel of the chart shows the trend in the margin of total capacity over noncoincident peak, as distinct from average, loads. The margin was exceptionally low in the early postwar period but has risen with only few interruptions since then. Note, however, that the margins during the 1950's are much lower than during the 1937–41 period. The difference is attributable primarily to the fact that less standby capacity is currently required to service peakloads, because individual systems are now largely integrated with one another.

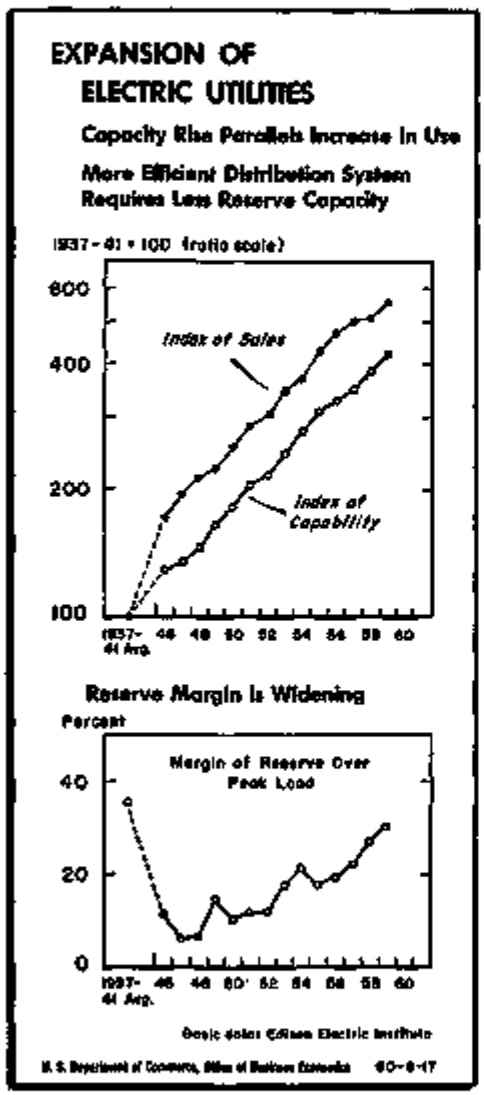
Cyclical behavior of investment

Investment has been subject to cyclical change, but during the postwar recessions, the declines in electric company outlays have been of lesser proportions than those for business spending generally. Moreover, the cyclical pattern of expenditures by type of facility has not been uniform. Since programs require a longer-than-average time for completion, investment has at times lagged turning points in overall investment; thus, in years following



downturns and recoveries, capital outlays for electric facilities have given a contracyclical appearance. In 1958, for example, when total plant and equipment expenditures decreased about one-sixth, investment in electric facilities remained essentially unchanged; it declined by about 10 percent in 1959, however, when the cyclical recovery in other plant and equipment outlays was getting underway.

Similarly, investment in the industry



rose in 1949, when elsewhere it was declining, but decreased in 1950 when the overall recovery in capital expenditures had begun. In the 1954 business recession utility investment fell and the decline continued in the recovery year of 1955.

The relatively mild postwar downturns reflect offsetting changes of greater magnitude in the component parts. These are illustrated in the chart, which presents a functional breakdown of outlays compiled by the Edison Electric Institute. These differ somewhat from those of the OBE–SEC series, in that the latter are on a company basis, whereas the institute data refer to electric utility plants only.

Investment in generation facilities exhibits considerable cyclical volatility; declines following the last two peaks have lasted 3 and 2 years, respectively. Leadtimes for this type of facility are long, so that the decision to reduce investment does not make itself felt for some time, and once a decline sets in, it may continue after demand has improved.

Fuel prices and costs

Since the beginning of World War II, utilities, along with other industries, have been faced with sharply increased costs of materials and other purchased items. Because fuel constitutes a major operating cost, a strong incentive exists to minimize the effect of these higher fuel prices by means of operating improvements, including more efficient burning equipment.

The problem, it should be noted, is not one that the utilities have always faced. In the late 1920's and 1930's, for example, fuel prices showed a declining trend, moving up only after the start of World War II in Europe. Since 1940, however, fuel prices per unit have increased by almost 100 percent, as may be seen in the first column of table 1.

Much of this rise in fuel prices has been offset by the economy in fuel use. The effect on fuel cost per unit of output is illustrated in the last column of table 1. Unit costs declined in the 1920's and 1930's; rose up to the early postwar period as prices increased faster than fuel efficiency, but have declined since.

Investment per unit of capacity

The very sharp increases in the costs of new construction and equipment have been one of the important characteristics of the postwar national economy. From 1947 to 1959, for example, the Department of Commerce implicit price indexes for nonresidential construction and producers' durable equipment advanced by a half; cost indexes of electric utility facilities,

Table 1.—Electric Utilities: Fuel Prices and Costs

Selected Years

	Fuel prices, dollars per ton of coal equivalent	Per kilowatt-hour generated [1]	
		Pounds of coal equivalent consumed	Fuel cost in cents
1937	4.69	1.82	0.36
1939	3.78	1.44	.23
1945	3.46	1.34	.23
1945	4.45	1.30	.29
1950	5.98	1.19	.35
1951	6.05	1.14	.34
1952	6.21	1.13	.34
1953	6.32	1.08	.33
1954	6.28	.99	.31
1955	6.27	.95	.30
1956	6.51	.94	.31
1957	6.64	.93	.32
1958 p	6.92	.90	.31
1959 p	6.76	.89	.30

p Preliminary.
1. Steam plant. Includes both public and private.
Source: Edison Electric Institute.

based on fixed types of construction and equipment, have shown even more of a rise. In spite of these changes, data on actual generating capacity additions by the electric utilities indicate that capital costs per unit of new capacity have undergone little change.

A detailed examination was made of the capital accounts and capacity data publicly reported by utilities.[1] Investment cost per unit addition to capacity was obtained by dividing the capital expenditure by the capacity change. In cases where the capacity change and capital expenditure figures could not be matched, they were not included. In both periods studied, however, coverage

Table 2.—Electric Power Companies

Percent Distribution of Steam Generating Capacity, by Size of Station

(Percent)

Size of station	1948	1953	1958
Under 50,000 kw	22.7	13.2	5.8
50,000–100,000 kw	12.2	10.4	6.4
Over 100,000 kw	65.1	76.4	87.9
100,000–500,000 kw	n.a.	67.0	66.8
Over 500,000 kw	n.a.	9.5	21.1
Total	100.0	100.0	100.0
Steam plant capacity as percent of total private capacity	78.9	84.1	88.6

n.a.=Not available.
Source: Basic data from Federal Power Commission.

1. Data are published in *Statistics of Electric Utilities in the United States*, Federal Power Commission, 1948, 1949, 1956, and 1957. The figures obtained were beginning and end-of-year nameplate capacity of generating facilities, and dollar additions to the generating plant account.

amounted to better than 80 percent of the aggregate increases in capacity.

Changes in costs per kilowatt of added capacity, based on the sample figures, are illustrated in the chart. Despite the sizable changes in materials and labor costs that occurred, the actual costs per unit of capacity addition in steam generating facilities declined somewhat from 1948–49 to 1956–57.

Trend toward larger plants

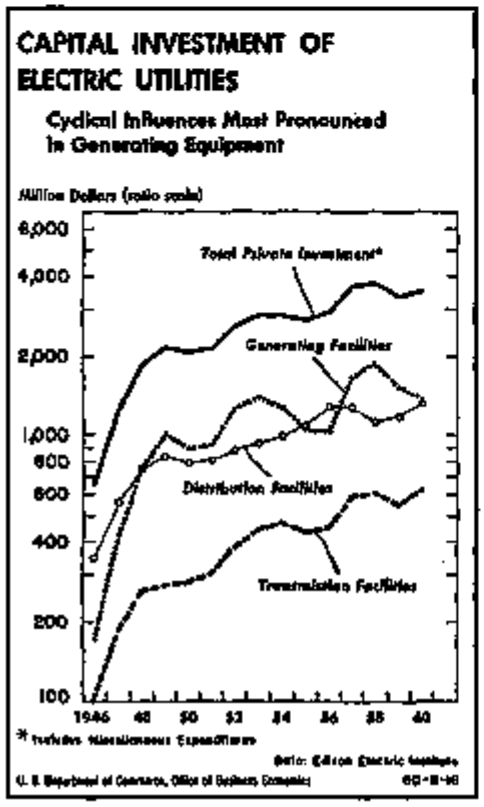
This is explained on the grounds of changes in plant scale and technological developments. An important feature of electric utility investment has been the trend toward the construction of increasingly large scale plants and plant additions. The distribution of existing plants by plant size, based on FPC data, is shown in table 2; the movement to large size is readily apparent.

If only plant additions are considered, as in the middle panel, the shifts are more striking. Based on the sample referred to above, generating capacity additions of 100,000 kw and over accounted for about two-fifths of aggregate additions in 1948–49; by 1956–57, the corresponding proportion for this size class had risen to approximately four-fifths. Units of 50,000 kw or less accounted for about one-fourth of additions in the earlier period but made up less than 5 percent of the total in the later period.

The significance of the shift is that at any given time, capital costs per unit of added generating capacity tend to fall as plant scale increases. Thus, in 1956–57, the unit investment cost of large plants was more than one-third less than that for plants of 50,000 kw or less. (See top panel of the chart.)

Transmission and distribution costs

The trend of capital costs per unit of new capacity in transmission and distribution facilities is less clear cut than in the case of generating facilities. A tabulation, similar to the analysis of generating facilities, showed a rise of about one-third in investment costs per unit of substation capacity addition for the years 1949 to 1957; this is somewhat less than the change in cost indexes applicable to such facilities. If substations alone are considered, there appears to be a definite decrease in current dollar cost per unit of capacity change over time. Based on expenditure and capacity data compiled by *Electrical World*, costs per unit of added capacity averaged $17 for 1947–50; $14 for 1951–55; and $12 for 1956–59.



Petroleum Industry Faces Excess Capacity

LAST year petroleum accounted for some 48 percent of energy consumed in the form of mineral fuels; the corresponding proportions in 1947 and 1939 were 36 and 34 percent, respectively. This growth in both absolute and relative terms has been accompanied by heavy capital outlays throughout the postwar period.

Demand patterns by specific end uses have been diverse and have reflected in part growing competition from natural gas, which is mainly limited to the industrial, space heating, and cooking markets, where fuel oil is especially important. In recent years, these have accounted for about one-third of total petroleum consumption.

Since 1950, fuel oil consumption at gas and electric power plants has declined. In mining, manufacturing, and space heating, the rise in petroleum consumption has been outstripped by the increased use of gas. For these three groups, fuel oil accounted for 48 percent of the oil and gas total in 1950 and for 38 percent in 1958. In transportation, where little competition exists, growth has continued on a steadier basis, though not so rapidly as in the early postwar period when time was required to make up the large deficit in the stock of automobiles in use.

Supply problems in petroleum

Despite the upward trend in petroleum demand, recent years have seen an imbalance between supplies available for domestic use and demand, and the current excess of capacity has affected domestic capital expenditures. This imbalance has resulted from the pressure of imports, which had accounted for an increasing share of the total U.S. supply of petroleum and petroleum products since the late 1940's, and from a decline in the growth rate of petroleum demand.

Table 3.—Expenditures for Petroleum Facilities

by Function

[Millions of dollars]

	Production [1]	Transportation	Refining [2]	Marketing	Total [3]
1947	1,750	310	400	300	2,835
1948	2,100	325	600	225	3,350
1949	2,000	270	420	240	3,060
1950	2,100	225	275	275	2,875
1951	2,650	300	325	300	3,525
1952	3,200	400	470	280	4,300
1953	3,525	450	675	325	4,925
1954	3,600	350	500	350	4,340
1955	4,100	240	535	325	5,000
1956	4,475	245	825	490	6,050
1957	4,525	300	950	475	6,400
1958	3,650	325	735	400	5,300
1959	4,000	275	825	450	5,425

1. Includes lease acquisitions; also expenditures for dry holes and intangible development costs charged to current account. Excludes exploration expenses and lease rentals charged to current account. Also includes outlays for natural gas.
2. Includes petrochemicals.
3. Includes miscellaneous expenditures.

Source: Chase-Manhattan Bank.

The Suez crisis stimulated demand in late 1956 and early 1957, but this effect was short-lived. Attempts to improve the domestic supply-demand balance took the form of a voluntary import quota system in mid-1957 (which was made mandatory in 1959), cutbacks in production, and reduced outlays for capacity additions, as may be seen in chart 6. Though imports continued to rise in 1958, the cutbacks in production were sufficient to lower stocks. Capital outlays were reduced sharply—by more than one-third from the third quarter of 1957 to the corresponding quarter in 1958, as drilling activity was slowed, and outlays for refining facilities were curtailed.

The improvement in demand in 1959 brought about a pickup in well drilling, though it was still below previous peaks; little change is planned for 1960. Refinery operations in 1959 continued at a reduced rate relative to capacity, and while some increase in refinery expenditures is scheduled for 1960, these are mainly for modernization and product improvement.

Cyclical investment patterns

Table 3 presents data on petroleum investment outlays, by function. Since production outlays can be altered with relative ease, these expenditures are somewhat more responsive to changes in demand than is the case with other types. Investment in production facilities dipped slightly during 1949, but recovered in 1950 while total investment by the industry was still being reduced. Investment was little affected by the 1954 recession as petroleum demand was maintained, but the 1958 recession brought on a fairly sharp reaction, with a 17-percent cutback in total, and a 20-percent reduction in production investment.

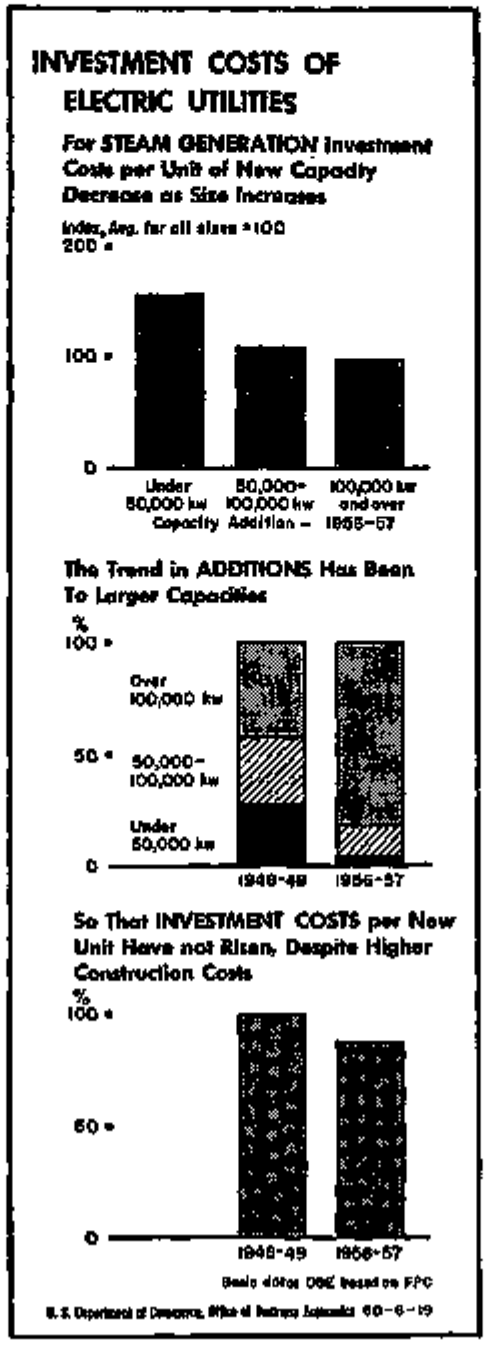
Capital outlays for refining and transportation facilities have exhibited marked fluctuations of longer duration. In this respect they resemble the generation expenditures of the electric utilities—an extended construction lead-time being common to both.

Emphasis on exploration

As table 3 shows, a significant portion of total outlays by the petroleum industry is devoted to exploration and production—about 70 percent in the past decade. Much of this is charged off as current expense and is therefore not included in the regular OBE–SEC investment series.

Two important aspects of this search for new petroleum supplies may be noted, both of which have a significant bearing on the position of petroleum as a basic fuel source and on the industry's capital outlays. First, the discovery of new oil reserves has also increased reserves of natural gas. Since both tend to be found together, the producing segments of these industries are almost fully intermingled. In 1954, almost three-fifths of the roughly half-million producing wells were classified as combination oil and gas producers; these accounted for five-sixths of natural gas produced in that year.

Second, the discovery of oil in this country has become increasingly difficult. This has necessitated deeper drilling, and as a consequence, increased costs per well (and per foot) drilled. Improved drilling technology, related to the increased rapidity of, and reduced downtime, in drilling, and more competitive conditions among drilling contractors, have provided a partial but important offset against the higher costs occasioned by deeper drilling and the rises in the costs of materials and other services required for drilling activity.



GAS—MOST RAPIDLY GROWING FUEL

Natural gas consumption has increased 2½ times since 1947, as pipeline construction has opened new geographical areas and natural gas has made inroads on other fuel markets. The substitution of natural for manufactured and mixed gas has been accentuated since the end of the war: in 1947, 25 percent of total residential gas sales were manufactured or mixed, but by 1958 the proportion had fallen to 6 percent.

Industrial and commercial usage, accounting for about two-thirds of unit sales, has also grown considerably. In electric utilities, for example, the natural gas share of total fuel consumption has risen from 13 to over 25 percent since the early postwar period. Here, as in other industrial and commercial areas, consumption has been mainly affected by the higher burning efficiency of gas as compared with coal and oil, and its lower cost in important and growing market areas. However, the competitive advantage held by natural gas has been declining as its price has risen considerably more than that of coal and oil in the postwar period.

Growing investment by gas companies

In the past 5 years gas utilities have accounted for about one-sixth of total capital outlays of the industries in this

review; this ratio is considerably higher than in the late 1940's. The gas investment totals, as noted, are somewhat understated because gas well drilling is commingled with oil and in these data such outlays are included with petroleum.

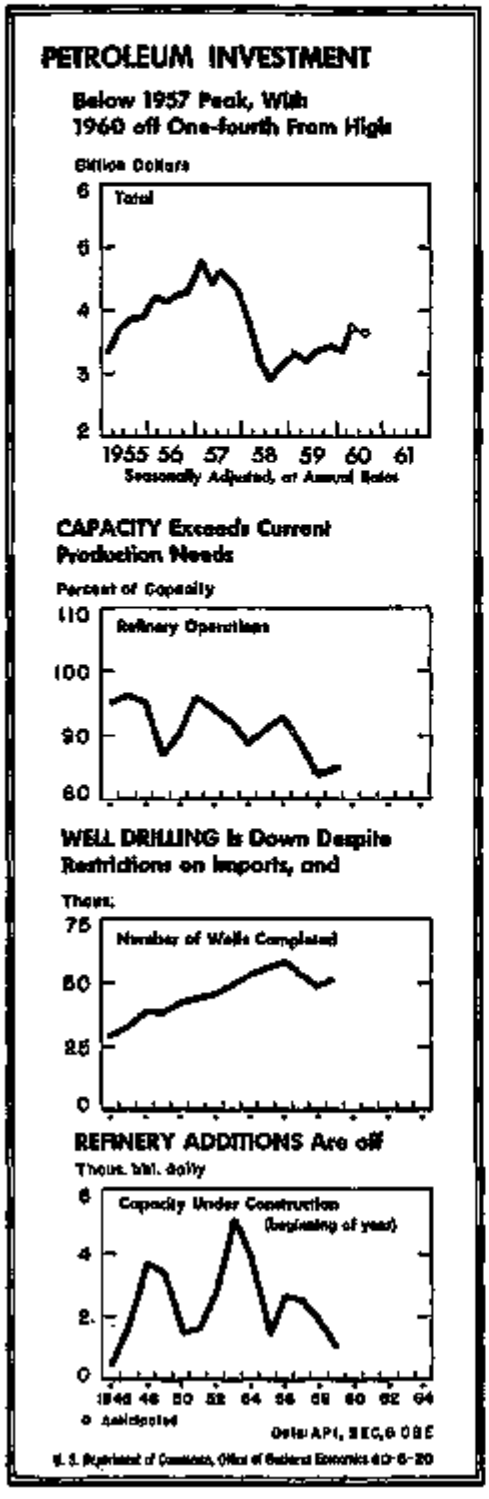
Capital expenditures by the gas companies were unaffected by the 1949 recession, but fell in 1954 and 1958. Outlays almost doubled from 1954 to 1957. The decline in 1958 was relatively mild and the projected figure for 1960 is within 6 percent of 1957.

Transmission expenditures are the single most important category, as may be seen in table 4, though their importance has diminished. In 1949–51, for example, such outlays accounted for some three-fifths of the total as against two-fifths for the 1957–59 period. One reason for this is the almost complete penetration of the major market areas.

Much of the distribution of natural gas has utilized the facilities already in place for manufactured gas; nonetheless, distribution expenditures have risen relative to the total, showing an almost unbroken postwar rise in line with the growth in new natural gas customers. The year 1958 was the first postwar year to show some drop, but outlays rose to a new high in the following year. By way of contrast, production and storage outlays have exhibited a sensitivity to each of the postwar recessions.

Economies in transmission

Table 5 presents data on estimated capital cost per unit of added capacity for pipeline expansions certified by the Federal Power Commission. Since the late 1940's cost per unit have risen considerably less than would be indicated by changes in costs of materials and labor of fixed specifications. Although to some extent the changes in unit costs of new capacity may reflect additions to previously constructed major trunklines, the data also reflect the trend toward the use of larger diameter pipe—a factor favoring investment efficiency. Transmission mains over 25 inches in diameter, for example, were less than 10 percent of the total pipeline mileage in 1948, but had risen to about one-fourth of the total in 1958. A similar trend toward the use of larger diameter pipe is also taking place in the petroleum industry.



COAL ADJUSTS TO DECLINING MARKETS

Compared with the other major fuels, investment by the coal industry has been small; the Census of Mineral Industries reported new expenditures by

Table 4.—Investment Expenditures by Gas Utilities

by Function

[Millions of dollars]

Year	Production and storage	Transmission	Distribution	Total [1]
1947	128	426	179	733
1948	148	370	219	770
1949	112	574	240	980
1950	143	710	300	1,106
1951	200	873	327	1,462
1952	176	400	349	1,057
1953	233	680	385	1,350
1954	159	304	423	1,066
1955	189	582	500	1,345
1956	238	705	533	1,562
1957	350	753	609	1,772
1958	201	715	541	1,618
1959 [a]	325	809	648	1,980

[a] Anticipated.
1. Includes miscellaneous expenditures.

Source: American Gas Association.

Table 5.—Natural Gas Pipeline Certifications

Estimated Capital Expenditures, Capacity Additions and Expenditures Per Unit of Added Capacity, Selected Years

Year ending June 30	Estimated capital expenditures (millions of dollars)	Estimated additions to daily delivery capacity (billions of cubic feet)	Estimated expenditures per unit of added capacity (dollars per thousand cubic feet)
1948 [1]	348	1.67	209
1949	508	2.50	213
1953	322	1.60	201
1954	501	2.00	251
1955	466	1.75	266
1956	461	2.23	205
1957	610	2.26	275
1958	510	2.25	231
1959	703	3.25	293

1. Excludes "Big Inch" and "Little Big Inch" pipelines.

Source: Certifications by Federal Power Commission. Last column computed by Office of Business Economics.

Table 6.—Coal Production Methods

Selected Years

	Percent of total production		Percent of underground production mechanically loaded
	Mined by stripping [1]	Mechanically cleaned	
1940	9	22	35
1945	10	20	54
1950	24	38	60
1951	22	46	73
1952	24	49	76
1953	24	53	80
1954	26	50	80
1955	30	50	85
1956	27	58	84
1957	27	62	88
1958	30	63	85
1959 [p]	32	63	86

1. Includes auger mining starting in 1952.
p Preliminary.

Source: Bureau of Mines, U.S. Department of the Interior.

establishments engaged in coal production of approximately $160 million in 1958 and about $110 million in 1954. The oil and gas figures, of course, include large expenditures for basic transportation and distribution, whereas the coal figures are confined to the producing segment.

Marked changes in coal production techniques have reduced labor requirements per ton. The use of continuous mining machinery, mechanical loading and cleaning has increased and there has been a shift from underground to strip mining, and more recently, to auger mining. (See table 6.) In 1958, bituminous coal produced per man-day averaged around 10 tons for underground mines, over 20 for strip mines, and more than 25 tons for auger mines.

The result of these technical changes shows up in a pronounced increase in output per man-day for the entire coal industry—from about 6¼ tons per day in 1947 to over 11 tons in 1958—a much faster increase in productivity than occurred in any other earlier time span of the same length. This rise has approximately offset the almost doubling of average hourly earnings over this period.

Foreign Travel

(Continued from page 9)

Travel deficit of U.S. increases

The deficit arising from the U.S. international travel account in 1959 increased by $134 million to a total of $1 billion. The largest excess of U.S. payments over receipts—a half billion dollars—resulted from travel between the United States and Europe. The difference reflected in part the lower average incomes in Europe, and in part the usual travel patterns of Europeans and our travelers. Also, travel to the United States by Europeans has been limited by exchange restrictions, some of which were put into effect before World War II to conserve Europe's low dollar supply for purposes of higher priority. The recent relaxations of these restrictions should accelerate the increase in receipts from European travelers, although as indicated above Europeans traveling abroad usually head for other destinations.

Table 4.—Expenditures by Residents of Foreign Countries

In the United States

[Millions of dollars]

	Expenditures	
	1958	1959
Visitors from all foreign countries	825	902
Canada	425	462
Persons staying under 48 hours	58	n.a.
Mexico	144	190
Persons visiting U.S. border only	120	138
Total overseas countries	256	290
Europe and Mediterranean	85	98
United Kingdom	24	28
West Indies, Central America, and South America	125	133
Other overseas countries	45	48

n.a.=Not available.

NOTE.—Includes expenditures of travelers for business and pleasure, foreigners in transit through the United States and students; excludes expenditures by foreign government personnel and foreign businessmen employed in the United States.

Source: U.S. Department of Commerce, Office of Business Economics.

Table 5.—Foreign Visitors to the United States

From Overseas Countries

[Thousands of travelers]

	Total	Business	Pleasure	Transit	Students
Overseas countries, total	1959 544	89	331	06	23
	1958 472	73	310	07	22
Europe and Mediterranean	1959 288	56	132	44	4
	1958 190	42	114	30	4
West Indies, Central America, and South America	1959 243	21	176	35	11
	1958 225	20	170	23	12
Other overseas areas	1959 68	14	28	17	8
	1958 57	11	26	14	6

NOTE.—Excludes visitors from Canada and Mexico; excludes foreign government personnel and foreign businessmen employed in the United States.

Source: U.S. Department of Justice, Immigration and Naturalization Service.

Expenditures in Mexico exceeded receipts in 1959 by $190 million, divided equally between interior and border travel, compared with a $103 million excess of payments in 1950.

The excess of payments for passenger fares over receipts moved close to $300 million. Against this deficit, however, are some offsetting factors in the balance of payments account. Foreign airlines are using U.S.-produced equipment primarily for long-distance trips and this has stimulated the export of planes. Also, the foreign ships and planes which carry travelers to U.S. ports pay the United States various port charges which provide some offset to the amount of fares paid to foreign carriers.

Receipts of fares by U.S. airlines for transportation between foreign countries—which are included as a transportation receipt in the balance of international payments—also provide some offset to the payments of fares by U.S. travelers on foreign lines.

It must also be taken into consideration that some items consumed by U.S. travelers within foreign countries have first had to be imported from us. In particular instances hotels used by Americans abroad are either foreign subsidiaries of U.S.-owned firms or are under management contracts with U.S. corporations, so that a part of U.S. expenditures abroad returns as income remittance to the United States.

Balance of Payments

(Continued from page 12)

of last year's production tieup in the steel and copper industries. The expansion of business activity in other industrialized countries has also contributed to our exports—particularly for certain industrial materials and capital goods. At the same time the slack in our own productive capacity in many industries has provided a higher export potential and a spur to meet foreign competition in foreign as well as domestic markets. Changes in capital markets here and abroad, arising out of these changes in business activity, have had only a limited effect on the size and direction of capital movements.

These developments represent an unusual combination of favorable circumstances for our balance of payments. Under such conditions, a reasonable equilibrium in our foreign transactions over the long run would require a balance considerably better than that achieved so far.

The foregoing analysis has indicated that some of the favorable changes were also due to the steps taken by American industry to meet foreign competition, and to foreign liberalization of restrictions on U.S. exports. Strengthened private efforts and requisite Government actions continue to be necessary, however, to make further progress in these directions.